tric ulcers are one-twelfth as common as duodenal and they are distributed two to one in favor of the men. This difference in distribution may be assumed to be due to the greater stress of modern life upon the male or, what seems more likely, to a greater tendency for emotional impulses to spread through the sympathetic system in the female and the craniosacral in the male. Certainly we see more atonic stomachs and intestines in women than in men.

Spasm of the colon in a mild form is the most common cause of constipation and as such is a matter of great concern to a large portion of our population. Most colons would perform more satisfactorily if allowed to go their own course without interference. In a rough way the tone of the colon corresponds to the general nervous tension. In times of stress we see either local or general spasm most evident in the sigmoid. It may be of some significance that diverticula (except the congenital form) are prone to occur at the common sites of spasm. They may be the late results of chronic constriction.

In our experience antispasmodics have little influence upon these conditions. Nitrites are sometimes useful but, like atropin, are erratic in their effects. Theoretically sedatives should be much more effective. We have had some success with luminal and it may prove valuable.

384 Post Street.

DISCUSSION

RAYMOND G. TAYLOR, M. D. (Hospital of the Good Samaritan, Los Angeles).—We are indebted to Doctor Ruggles for presenting this important but neglected angle of gastro-intestinal disease or symptoms. While there are no rules to govern, it would seem that his suggestion to repeat the examination when no organic lesion is found, or when one is in doubt, is a good one. My experience would lead me to believe that the most common point for spasm engendered by the emotions is in the lower descending colon rather than in the sigmoid.

I agree heartily with Doctor Ruggles that the ordinary antispasmodics are unreliable and of but little use. Considerable personal experience with luminal, especially in spasm of the colon, leads me to believe it more often produces results than the more commonly used drugs.

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ORRIN S. COOK, M. D. (Mater Misericordiae Hospital, Sacramento).—This is a timely paper on an important subject about which very little has been written.

I have recently seen three patients, two of whom were high-pressure business men, with quite marked gastro-intestinal symptoms. The only x-ray findings were marked spasm and irritability of the colon, and symptoms were relieved entirely by appropriate treatment. The third patient was a very nervous woman, who had had her appendix removed for the same symptoms without relief, and in whom the x-ray findings were the same as in the two men.

Undoubtedly patients are at times subject to surgery whom the roentgenologist may save from unnecessary operation if he will bear this condition in mind.

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ROBERT R. NEWELL, M. D. (Stanford University Hospital, San Francisco).—Doctor Ruggles has made an interesting entry on a difficult field. Morbid physiology is a much less steady foundation for diagnosis than is morbid anatomy. This is partly because it is less narrowly topical. Due to the functions of the nervous system and the hormones carried by the blood, disease in one location may cause disturbance of physiology at other locations, sometimes very remote ones.

If the roentgenologist desires merely to make diagnoses wherever possible, he will perhaps wisely limit his observations to evidences of anatomical lesions. But if he has a broader view of his obligations, if he wishes to be of maximum service to his clinical consultant, he will note and report also the variations in constitution and in physiology which his methods may reveal.

That disturbed physiology from remote causes may at times lead to mistaken diagnosis cannot be denied. Doctor Ruggles has cited some interesting instances. But I do not believe these are frequent. More often we find these functional disturbances interfering with our roentgenoscopic visualizations without actually misleading us. We are loath to call a viscus anatomically intact until we can see it in its entirety. That these functional obstructions to roentgenological certainty can often be removed by attention to the patient's emotional state is, I think, the most important thing in Doctor Ruggles' paper. We will be well rewarded when we take the time to repeat unsatisfactory gastro-intestinal examinations and exhibit the sympathy necessary to relieve unsatisfactory emotional states. I have been dumbfounded at the miraculous effect sometimes observed in a stubborn pylorus following a minute's conversation on the subject of good things to eat.

In regard to antispasmodics, they may be two-edged. That a certain sign disappears temporarily on antispasmodic medication does not prove it to be of no importance. I believe it is often possible to relieve the topical spasm of duodenal ulcer by full doses of atropin.

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# PSYCHIATRY IN ACTION*

*By* ROBERT L. RICHARDS, M. D.
*San Francisco*

DISCUSSION *by G. E. Myers, M. D., Los Angeles; Edward W. Twitchell, M. D., San Francisco; Joseph Catton, M. D., San Francisco.*

A LITTLE more than one hundred years ago the mentally sick were lifted from their loose straw and dungeons to mattresses and prison cells. About 1840 the medical superintendents in Pennsylvania and the East advocated and practiced a plan of treating and curing the mentally sick that compares favorably with modern methods. But it was not until the nineties that hospital care and treatment was generally adopted. In 1909 Mr. Clifford Beers formed the National Mental Hygiene Society and introduced community standards and plan as opposed to the institutional and political plan. In 1912 Dr. E. E. Southard in the Boston Psychopathic Hospital adopted the ideal of a community hospital and community service. Since then in rapid succession have followed outpatient clinics from Maine to California, and even traveling clinics in Iowa, Colorado and a few other places. Since 1922 child guidance clinics have been established from coast to coast and have contacted and coöperated with schools, social agencies, juvenile courts, and problem children in homes. Industry has found it profitable to employ full-time psychiatrists to care for the mental

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hygiene of employees, to reduce labor turnover, to lessen accidents, and to increase efficiency. Families of their own accord are requesting preventive work for mental problem children and aid in caring for chronic mental patients at home. In New York about four thousand patients have been removed from state hospitals and cared for in the communities. Even in general hospitals one now finds in the case histories mention at times of the mental attitude of patients to the disease and rough estimates of the type of personality. Occasionally in general medical journals one now reads of the influence of mental factors upon disease and the need of recasting medical education in psychiatry. In general hospitals and out-clinics, mental cases are now being cared for as accurately and as successfully as medical and surgical cases are cared for. In 1909 the United States Army formally recognized psychiatry as a specialty, and in 1917 established an efficient neuropsychiatric service in the war. Mental deficiency and epilepsy are now definite sections in the American Psychiatric Association.

All this means that psychiatry has come from behind its walls and gone into action to meet the increasing demands of the community. Psychiatry is learning to speak in terms understood by medicine in general, by social organizations and by the public at large. This also means that the medical student must know something of mental facts and diseases and the possibilities and the limitations of psychiatry. The student must be prepared to meet the demands of the community in which he lives.

### PSYCHIATRY IN WAR

In the spring of 1917 I met with a small group in New York at the National Committee for Mental Hygiene to organize a military neuropsychiatric service under Colonels Bailey and Salmon. It is interesting to note that the doctors selected for this service rated the highest in the mental test given to the medical corps and equaled the highest standard required in the Army—that of the engineers. Having had charge of the operating of neuropsychiatric boards on the Pacific Coast and of the care of all discharged mentally disabled soldiers from the Rocky Mountains west, I can state that psychiatry met these demands efficiently and coöperated intelligently with the military organization in the prevention and treatment of mental conditions during the war. The only complete mental survey during the war was made at Camp Kearney, and the mental disability discharges later from that division were almost negligible. Psychiatry in action in war was successful. Psychiatry in action in peace can be equally successful. But psychiatry in peace must talk more in terms of human behaviorism and not in technical terms of psychological differentiations.

### PSYCHIATRY IN PEACE

Recently in the Alameda County community the superior judges demanded that mental cases for commitment receive better medical treatment. In Highland Hospital an improvised twelve-bed ward was made available and has operated satisfactorily to the judges and the community for about two years. The nursing personnel was almost entirely untrained and was an average general hospital personnel. Part of the time the interns served on a twenty-day basis, but were generally more confused than efficient during the brief service. Later a resident physician, relatively untrained, was obtained and this arrangement has proven more satisfactory. The patients have remained in the ward for treatment and study from two days to two weeks, because of the coöperation of the judges. All cases were given a diagnosis, and all state hospitals reported to us their final diagnosis made at the end of one to three months. This was therefore comparable to a receiving and a final diagnosis in a general hospital. In Cook County Hospital in Chicago the changes of admittance diagnosis after study in the various wards were found to average 15 to 20 per cent. It is well to see if psychiatry is equally successful under similar conditions.

### COMPARISON OF COMMITMENT DIAGNOSIS WITH THAT OF STATE HOSPITALS

I have selected for a comparison one year's current cases on the psychopathic ward of Highland Hospital. No paroles or parole institutions were used as in Los Angeles. These cases were either safely treated on discharge at home after two days to two weeks' study or they were sent to state hospitals. A few cases sent to homes have subsequently been returned for commitment, but on the whole the psychiatric judgment has been correct and no damage has occurred from this plan. Indeed the community is so constantly seeking the service that many must be refused because of the limited facilities of the hospital.

Two hundred and forty-eight cases were committed to state hospitals in California, and one hundred and sixty-four cases were discharged to their homes without commitment. In these two hundred and forty-eight committed cases by comparing the initial tentative diagnosis with the subsequent state hospital diagnosis we can estimate objectively the accuracy of psychiatry in action. Briefly, I find the following interesting facts:

1. The total or gross divergence in diagnoses was 16 per cent (forty cases). In no instances, however, had this worked to the detriment of the patient.

2. The net divergence in diagnoses was 2.8 per cent (seven cases) where the difference in diagnosis was a radical one and not merely a degree of emphasizing of certain trends.

3. In addition because of inability to secure the serological facts in the time at our disposal, nine cases (3.6 per cent) of paresis were missed. In looking back over our clinical records I am still unable to confirm the state hospital diagnosis in the absence of serological findings in these cases.

4. The greatest divergence in diagnoses (10 per cent, twenty-five cases) was naturally in the groups diagnosed manic depressive psychoses and dementia praecox. Of these twenty-five cases I found that in sixteen cases (6.4 per cent) we had made an original diagnosis of dementia praecox

which was subsequently changed in the state hospital to manic depressive psychosis. On the other hand, in only seven cases (2.8 per cent) had we made an original diagnosis of manic depressive psychosis which had subsequently been changed to dementia praecox in the state hospital. Evidently we were overly cautious and pessimistic as to outlook in a number of cases on short periods of observation of the beginning of the attack and more time was necessary for good judgment.

Our diagnoses in the two hundred and forty-eight cases were: dementia praecox, 63 cases; manic depressive psychoses, 63 cases; neurosyphilis, 27 cases; senile psychoses, 28 cases; alcoholism and alcoholic psychoses, 28 cases; paranoid states, 18 cases; drug addiction 9 cases; epileptic psychoses, 5 cases; toxic psychoses, 5; psychopathic with suicide, 2.

## PSYCHIATRY IN MEDICAL EDUCATION

In medical education so far psychiatry has failed because it has not been understood by the average medical student. What the average medical student does not understand he scorns. He has two favorite mental reactions: (1) that psychiatry is hopeless and he knows nothing about it; (2) that nobody else knows anything about it and he amuses himself by "playing with it." Of course he runs away from a psychiatric patient when danger threatens.

Psychiatry can attack the problem of medical education in two ways:

1. Create a public demand by practical efficient work in the community—a flank attack.

In creating a public demand we shall meet many nonmedical forces who regard all actions as either good or bad and having no scientific conservatism, rush to some imagined goal and form cults and movements of all sorts. Evidently there is need of scientific medical guidance or the end is worse than the beginning. Pragmatic success in treating mental cases is the only basis on which we can approach the community. Diagnosis and prognosis are of value only to scientific medicine. They have no value with, and stir up opposition in a community. As usual the community has tried all the known home remedies for human behavior before the psychiatrist sees the case. Hence you must talk the language of behaviorism and secure practical results or explain the reason why such results are impossible. The final usable human functioning results or protection against unusable human functioning results—these are what the community wants. If you can give them such results you can secure the community support and turn the flank.

2. Change psychiatric instruction to correspond with other medical instruction and, beginning with a physical basis in the brain cortex, work out logically and consecutively to mental diseases and mental problems—a frontal attack. Fortunately in the works of Franz, Lashley and Herrick in this country we have a knowledge of the laws governing cortical action, and there is no more "a large silent area of brain cortex." These laws correspond with what we know of the behaviorism of animals and of the mental development of the human being.

My main effort is to suggest a scheme of psychiatric instruction in harmony with other medical instruction and confined to the needs of the general practice of medicine. I am aware that the demand in medical education today is for the basic needs of medicine as opposed to specialized knowledge of medicine. It is well, however, first to state two facts in regard to the basic needs of medicine as we know it today:

1. Medicine is now more concerned with efficient living than with prevention of death. Successes in combating infections, health examinations and general sanitation efforts indicate this fact.

2. Practically it is admitted that neuroses form a large part of medical work—even estimated as high as 80 per cent. Faulty mental adjustment is admittedly the basis of neuroses, and medical education must take cognizance of training in seeing and understanding the import of mental facts or give up the treatment of neuroses altogether if fair with the community.

## SUGGESTED PSYCHIATRIC MEDICAL INSTRUCTION

### I. BRAIN HISTOLOGY

1. Structure in general of the brain cortex and in what ways it differs from the structure of other bodily organs with the therefore presumptive relation of the brain cortex to the body as a whole.

2. Experiments in discovering how this brain cortex functions as a whole: whether it is silent as to function in three-fourths of its structure; or whether the function is measured in some other way than activity and inactivity as other bodily organs are measured. Laws of human brain function.

3. Evolutionary data as to the functioning of animals with no brain cortex, with the simplest fore brain structure, with more or less automatic midbrains, and with actual brain cortices.

4. Human versus animal behaviorism: how man leaves the instinctive animal level and plans toward some goal; how man starts with the smallest structural and therefore the most plastic beginning and grows through various stages to senility.

5. Personality growth: growth accidents; line of growth determined by location of fixed points; relation of heredity and environment to growth.

6. Analysis of student's own personality trends.

### 2. BRAIN PATHOLOGY

1. General consideration: Personality always the background. Quantity of mental power always secondary to the line of growth and other qualitative factors. Acuteness or chronicity of the process depends upon etiological factors.

2. Mental lack or defectiveness.

3. Psychopathic personality or deformed growths.

4. Effects of acute and chronic infections and certain poisons on the brain cortex.

5. Type of functional reactions of the brain

cortex vary at different age levels, *e. g.*, childhood, adolescence, adulthood, senility.

6. General types of pathological functioning of the brain cortex associated in part with general bodily conditions.

### 3. GENERAL GROUPINGS OF CLINICAL MANIFESTATIONS OF PATHOLOGICAL BRAIN FUNCTIONING

1. Maladjustments at different instinctive and growth levels leading to neuroses under stress such as hysteria, neurasthenia, anxiety states, etc.

2. Emotional variations of a pathological degree leading to manic depressive psychoses.

3. Deformities of growth leading to paranoid states.

4. Destructive crippling of growth leading to dementia praecox.

5. Destructive changes leading to the mental deterioration of dementias.

6. Explosive changes shown in the excitements of epilepsy, hysteria, arteriosclerosis, certain poisons, and in dream states.

### 4. PREVENTIVE MEASURES

1. Care to establish the necessary basic trend of successful personality growth in the plastic stage of childhood. Birth and other traumas are mentally serious.

2. Influencing personality growth by measures belonging at that mental level and not by adult measures—especially childhood and adolescence.

3. Sex instruction at the proper time and of the different biological or emotional kinds.

4. Avoidance of alcohol, syphilis, and habit-forming drugs.

5. Acute and chronic infections and head traumas mean mental as well as physical care and convalescence.

6. Earlier mental abnormalities with mental treatment and nursing are curable. Many older mental abnormalities are not curable and must remain in a limited environment all their lives. Hence early recognition is a medical responsibility.

Either psychiatrists will select and advocate some plan of action or some chance plan will be formulated by those who do not know that psychiatry long ago passed the stage of psychoses or insanities and is now an important part of community medical work. If an intelligent plan is adopted psychiatry will be understood and no longer be called the stepchild of medicine.

384 Post Street.

### DISCUSSION

G. E. MYERS, M. D. (1052 West Sixth Street, Los Angeles). — In connection with Doctor Richards' paper, I should like to mention some statistics:

In the United States are 140,000 physicians. There are approximately 1,000,000 persons employed in the general field of medicine. Between $5,000,000,000 and $10,000,000,000 are invested in hospital buildings and equipment. There are 563 institutions for the care of mental patients, with a capacity of 373,364 beds, and 4322 general hospitals with a capacity of 345,364 beds. Thus, while there are 3759 more general hospitals than hospitals for mental disease, there are 28,000 more beds in the hospitals for mental disease than in the general hospitals.

The National Committee for Mental Hygiene has stated that, of the children now attending school and college, about "960,000 will enter a hospital for mental disease at some period of their lives, if the present rates for first admissions are maintained." Neuroses alone, according to Dr. William J. Mayo, are responsible for more human misery than tuberculosis or cancer.

There is much that we do not know about medical statistics. The work of the Committee on the Cost of Medical Care, of which Dr. Ray Lyman Wilbur is chairman, is therefore of the greatest importance. After some previous discussion in 1925 and 1926, fourteen persons met in informal conference in Washington on April 1, 1926, to consider problems regarding the economics of medicine. At the close of this conference a committee of five was appointed to formulate a tentative series of studies concerning the economics of medical service and to develop plans for the creation of a committee to be responsible for their conduct. This committee met several times, formulated a tentative list of studies, communicated with a considerable number of physicians, sanitarians, and economists to ascertain their opinions regarding the proposed plans, and arranged a conference in Washington, May 17, 1927, at the time of meeting of the American Medical Association. This conference resulted in the creation of the above-mentioned committee. The committee as now organized consists of forty-two persons—fourteen private practitioners of medicine, six representatives of the public health field, eight representatives of institutions interested in medicine, five economists, and nine persons representing the general public. A five-year program has been outlined for a wide and thorough investigation of the medical situation, with plans for securing reliable statistics which are not available at the present time.

An important part of the investigation will be in the field of psychiatry—"Among what proportion of adults might early symptoms of mental and nervous disorders be discovered which could be successfully dealt with were there qualified specialists available?" "What facts would similar studies reveal among college students, among high school students, and among elementary school pupils?" "For what length of time and with what cost have psychoneurotic patients been treated for general disorders before the true nature of the disability was recognized?" Extremely interesting and reliable data are being secured by the Department of Mental Disorders of the state of Massachusetts, as well as by other organizations, in coöperation with this committee. The cooperation of all physicians should be given.

It is highly desirable that more young men, well equipped through education, should be attracted to the field of neuropsychiatry. The inadequacy of teaching facilities in this field in the past has been deplorable. This situation is being remedied in some quarters at the present time as at the Columbia-Presbyterian Medical Center in New York City, where the magnificent New York State Psychiatric Institute and the Neurological Institute will provide clinical material for teaching purposes.

An outline such as Doctor Richards has proposed is very timely and merits the most careful thought.

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EDWARD W. TWITCHELL, M. D. (909 Hyde Street, San Francisco).—It is just as well that there should be an increasing interest in psychiatry on the part of both physician and laity, as the next generation is going to have greater need of it than had any before. The organism does not adapt itself to changed environment with great rapidity when certain limits are passed. Those whose forebears have been for generations country folk react badly to city life and its stimuli. Even the old-time city dwellers have a multitude of new problems to face in the city of the

present. The increase of competition, the acceleration of pace, the multiplication of noises and hazards and the changed character of foods, all play a part in the etiology of nervous disease. Finally the increased socialization of medical aid by accident and health insurance will end in a vast number of neuroses to be treated at the expense of the state, as the experience of State Compensation Commissions and the Veterans' Bureau has already shown.

It will therefore be likely that the physician of the future will have much more to do with nervous and mental disease than had his brother of the past. We have seen whole groups of disease, such as typhoid, malaria and diphtheria, formerly the mainstay of the family doctor, reduced, some of them, to the vanishing point, but the psychoses and the neuroses are showing no sign of abatement. Men will be needed to treat these diseases, and must be trained in the medical schools.

There is little opportunity for the student to learn the treatment of the neuroses in the medical schools at present. Neurological clinics as now organized cannot give adequate treatment to the psychoneurotic. The work is so time-consuming that the clinic would soon be choked with waiting patients if the needed time were given, and unless this time be given there can be no results.

One of the most needed things and one of the most difficult to achieve for the neurological department, is a satisfactory solution of the problem of the psychoneurotic. Some such program as that suggested by Doctor Richards is much to be desired.

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JOSEPH CATTON, M. D. (209 Post Street, San Francisco).—Doctor Richards' paper outlines clearly the increased rôle that psychiatry is coming to play in many of our social problems. He makes an eloquent plea for the proper education of physicians in order that they may meet the newer responsibilities which they are being asked to shoulder. The physician has been taught quite well to care for the disease which a patient has, and very little of how to treat the patient who has the disease. In the relationship "physician-individual patient," it is most important that the physician have an understanding of the whole patient—his background, his environment, his personality type, etc., if he would care adequately for the diseased heart or kidney.

Equally important, however, the physician must learn that society has discovered the psychiatric aspects of pauperism, unemployment, prostitution, drug addiction, and the various forms of delinquency; and the practical hopelessness of caring for a full-blown social failure has been recognized. Fortunately, however, proof is being added each day that investigation by properly qualified psychiatrists may nip in the bud the tendencies toward these aggravated "end-results." I would suggest that one read very carefully Doctor Richards' paper and that, having read it, although one may forget much of his detailed exposition, he should carry away with him the most important indication of Doctor Richards' essay. It is this: that society has discovered that psychiatry offers expert service in connection with community problems. Doctor Richards makes a plea for what should have been, but has not been, obvious: namely, medical schools should prepare a certain percentage of our graduates to give competent psychiatric aid to the community.

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DOCTOR RICHARDS (closing).—Medical students tell me they would be interested in studying the brain cortex and its functions (mental facts) as an organ in the human body even if they never studied psychiatry as a specialty. Therefore a scheme was suggested covering such needs of an average medical student. I hope that it will lead to discussion, criticism and adjustment by those responsible for medical curricula. After a study of the brain from a comparative anatomy point of view Sir Arthur Keith estimated that the human brain had not attained more than 50 per cent of its possible development. Doctor Tilney of New York estimated that the human brain had reached only a 25 per cent stage of development. From the viewpoint of what we already know of brain function and the viewpoint of greater possible development, certainly the brain deserves more consideration than it now receives as an organ in the human body.

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## DIAPHRAGMATIC HERNIA*

*By* W. E. HUNTER, M. D.
*Salt Lake City, Utah*

DISCUSSION *by George W. Middleton, M. D., Salt Lake City, Utah; James P. Kerby, M. D., Salt Lake City, Utah.*

DIAPHRAGMATIC hernia, by reason of a recent death in a newborn child about four months ago, became a subject of special interest to me. I had begun searching the literature and had it on my desk when a second patient was brought to the office with a traumatic diaphragmatic hernia. The study of these two cases was the means of discovering a third patient with diaphragmatic weakness. It is these three cases which I report at this time.

### CASE REPORTS

CASE 1.—On January 18, 1927, Mrs. B. of Mount Pleasant engaged me to care for her during her third pregnancy. The previous pregnancy was normal and the baby was born without difficulty, but died shortly following birth. It was to prevent a repetition of the previous labor that she was brought to Salt Lake.

The present pregnancy was accompanied by the usual discomforts of childbearing, but otherwise was normal in all respects until July 23, 1927, when the patient complained of "shortness of breath" and a "tense feeling in the abdomen." At this time she was found to be suffering from a beginning hydramnios. The liability to premature labor and the tendency to fetal abnormality in cases of hydramnios was explained to the husband and the patient advised to stay within easy reach of the hospital. On September 12 the patient telephoned that the "membranes" had ruptured and that more than two gallons of water had come away. At the hospital four hours later she gave birth to a six and a half pound baby girl. The labor was not difficult. The child looked normal, but did not cry.

I had just finished explaining to the husband that the baby had no deformity, when I discovered that it was not breathing properly. I severed the cord and began mouth-to-mouth insufflation. I soon discovered I could not insufflate the lungs normally, but instead was forcing air into the stomach. This air became incarcerated, and could not be relieved except by the insertion of a catheter into the stomach. This is not the case in the normally developed baby. A hand applied on the epigastrium will prevent air going into the stomach and when it does enter the stomach it can easily be expelled by pressure. My further examination showed that the heart was on the right side. Later I was able to insert a catheter into the trachea, but even then I could not inflate the lungs as I wanted. By continuous effort the child's heart was kept beating for one hour. An autopsy was obtained after considerable duress, and the condition, as shown in Figure 1, was found.

*Autopsy.*—On opening the abdomen and thorax the appendix was found high in the epigastrium. The stomach was found unrotated and occupied the middle half of the left thoracic cavity, pushing the heart far to the right. The descending and transverse colon occupied its outer half. The left lung was not more

* Read before the Salt Lake County Medical Society, January 16, 1928.